

Claims

1. Concrete article, characterised by the fact that the concrete article contains a concrete thickener comprising the following components:
 - d) about 20 to about 40 % by weight, preferably about 30 % by weight, of at least one thickening agent;
 - e) about 20 to about 40 % by weight, preferably about 30 % by weight, of at least one hydrophobing additive; and
 - f) remainder water.
2. The concrete article as claimed in Claim 1, characterised by the fact that the thickening agent is an organic or inorganic polymer.
3. The concrete article as claimed in Claim 2, characterised by the fact that the thickening agent is selected from the group consisting of polyacrylates, polymethacrylates, polyurethanes, alginates, polyoses, cellulose derivatives, polycarboxylic acids, polyethers, polyimines, polyamides, silicic acid derivatives, zeolites and/or combinations thereof, polyacrylates, polyurethanes, cellulose derivatives and silicic acid derivatives being preferred.
4. The concrete article as claimed in any of the preceding claims, characterised by the fact that the concrete thickener is present in the concrete article in a proportion of about 0.01 to about 2.0 % by weight, preferably about 0.04 to about 1.0 % by weight.
5. The concrete article as claimed in any of the preceding claims, characterised by the fact that the hydrophobing additive is selected from the group consisting of silanes, siloxanes, silicones, siliconates, fluorosilicates, hydrosilanes, fatty acids and their salts, waxes, acrylic resins, epoxy resins, polyurethane resins, sodium silicates (alkali silicates), silicic acid esters and/or combinations thereof.

6. The concrete article as claimed in any of the preceding claims, characterised by the fact that the concrete thickener further comprises dyes, water-soluble polymers, polymer dispersions, surface-active substances or mixtures thereof.
7. The concrete article as claimed in any of the preceding claims, characterised by the fact that the concrete article contains further concrete admixtures, such as concrete additives and/or concrete addition agents.
8. The concrete article as claimed in Claim 7, characterised by the fact that the concrete additives are selected from the group consisting of concrete liquefiers, fluxes, air pore forming materials, sealing agents, retarders, accelerators, injection aids, stabilisers, chromate reducers, recycling aids for washing water and/or combinations thereof, and the concrete addition agents are selected from the group consisting of trass, powdered stone, coal flue dust, silica dust, pigments and/or combinations thereof.
9. The concrete article as claimed in any of the preceding claims, characterised by a water/cement ratio of about 0.3 to about 0.5 preferably about 0.4.
10. The concrete article as claimed in any of the preceding claims, produced in a vibration-compaction process.
11. A process for producing a concrete article, especially as claimed in any of the preceding claims, comprising the following steps:
 - iii) mixing cement, grains of stone and make-up water, and optionally further concrete admixtures, such as concrete additives and/or concrete addition agents, in a mixer; and
 - iv) subsequently adding a concrete thickener to the mixture from step i), the concrete thickener comprising the following components:
 - d) about 20 to about 40 % by weight, preferably about 30 % by weight, of at least one thickening agent;

e) about 20 to about 40 % by weight, preferably about 30 % by weight, of at least one hydrophobing additive; and

f) remainder water.

12. The process as claimed in Claim 11, characterised by the fact that the concrete thickener is added into the mixer via an evacuation pump and a spray nozzle.

13. A concrete thickener, especially one for thickening a concrete article, which comprises the following components:

a) about 20 to about 40 % by weight, preferably about 30 % by weight, of at least one thickening agent;

b) about 20 to about 40 % by weight, preferably about 30 % by weight, of at least one hydrophobing additive; and

c) remainder water.

14. The concrete thickener as claimed in Claim 13, characterised by the fact that the thickening agent is an organic or inorganic polymer.

15. The concrete thickener as claimed in Claim 14, characterised by the fact that the thickening agent is selected from the group consisting of polyacrylates, polymethacrylates, polyurethanes, alginates, polyoses, cellulose derivatives, polycarboxylic acids, polyethers, polyimines, polyamides, silicic acid derivatives, zeolites and/or combinations thereof.